

PROCEEDINGS OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON

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ORDINARY MEETING

WEDNESDAY, 1ST DECEMBER, 1948, at 5.30 p.m.

AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 3rd November, 1948.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Additions to the Library.

Presented.

The Chemical Society. *Record of the Centenary Celebrations*. 8vo. London. 1948. [The Chemical Society.]

Purchased.

Herbulot, C. *Nouvel atlas d'entomologie*. No. 6, fasc. 2. Atlas des Lépidoptères de France. Hétérocères. 8vo. Paris. 1948.

In addition separates have been presented by the Commonwealth Institute of Entomology, Professor F. Silvestri, the American Entomological Society, the Smithsonian Institution, Professor P. A. Buxton, Mr. H. M. Hallett, Mr. P. W. Fattig, Mr. H. S. Leeson, Capt. K. J. Hayward, the Rothamsted Experimental Station, the Royal Society, and Dr. A. D. Imms.

5. Nomination of Officers and Council for 1949.
6. Papers accepted for publication in the *Transactions*.
7. Admission of Fellows.
8. Communications.

As already announced, the meeting will be devoted to small exhibits of special interest requiring only short explanation.

TEA will be served in the Library before the meeting.

JOINT MEETING WITH THE LINNEAN SOCIETY

THURSDAY, 9TH DECEMBER, 1948, AT 5.0 P.M.

in the rooms of the Linnean Society

at

Burlington House, Piccadilly, London, W.1

AGENDA

The bearing of the parasite-host relationship on Taxonomy.

The following have agreed to speak :

1. Dr. J. Ramsbottom, O.B.E.

The parasite-host combination in plants, in relation to taxonomy.

Parasitism in the Plant Kingdom is found mainly among fungi, to a less extent in flowering plants, and, very rarely, in algae and lichens. Fungi, moreover, occur as parasites on all plant groups including themselves, and on all animal groups.

In considering the parasite-host relation on taxonomy several problems arise. The parasite-host combination of two organisms has not necessarily the same physiology as that of the host. The action of parasite on host may range from apparently harmless to deadly; a parasite may be restricted in its host-range and may be incapable of independent existence.

Has the relation had any bearing on the taxonomy (or evolution) of either or both parasite and host?

The general structural and physiological characters of plants serving as protective devices against fungal attack are so many and so varied that they cannot be regarded as having been "specially evolved" for the purpose.

We can gain no clue from parasites which attack many hosts; there is the possibility that some parasites which cause abnormalities might, occasionally, bring about genetical changes, but for this there is no evidence. Consideration is best directed to those parasites which are restricted in their range of host, which often occur as epidemics and in which the infection is of long duration. Systematic infection may be regarded as having much in common with the mycorrhizal habit and symbiosis.

Evidence seems to point to fungal parasites having evolved in relation to their hosts, but not to have influenced their development except where the attack-defence system is so balanced that it is regarded as symbiosis.

2. Dr. O. W. Richards, M.A.

The "cuckoo" bees and wasps are an example of a peculiar type of parasitism which throws a useful light on the evolution of the species and illustrates some important taxonomic difficulties. The "cuckoo" species seem largely to have evolved when a species with a prolonged oviposition period invades the territory of a closely allied, usually more northern, species which nests earlier. A complete series can be traced from forms which are only just generically distinct from their hosts to those which have evolved so far that their ancestry is now uncertain. In the less specialized species there is often evidence that characters indicative of the parasitic habit have evolved more than once and that therefore the genera may be to some extent polyphyletic. There is evidence that once the parasitic habit is fully developed, the species become less particular as to their hosts, so that their attentions may be transferred to hosts which are only distantly allied. It can also be shown that the parasitic species tend to split up into strains attached to various host-species.

3. Mr. G. H. E. Hopkins, O.B.E., M.A.

Some factors which have modified the phylogenetic relationship between parasite and host in the Mallophaga.

The Mallophaga are a group of insects, obligate ectoparasites of birds and mammals, in which there is a high degree of correlation between their classification and that of their hosts. This is inherent in the generally accepted theory of their evolution, in which they are believed to have become parasitic during the early stages of the evolution of their hosts, and after an initial period of rapid evolution, to have evolved with their hosts, but at a slower rate. Hence, the phylogenetic relationships of the Mallophaga, in general, reflect those of their hosts, and may be used in many cases as confirmatory evidence in placing birds and mammals of doubtful affinities in their correct systematic position. However, there are certain factors which have modified or obscured this basic relationship and limit the universal application of the principle. These factors include discontinuous distribution, secondary infestations, convergent and parallel evolution, and bad taxonomic work.

TEA will be served in the Library of the Linnean Society at 4.30 p.m.

A card index of Fellows' addresses arranged on a geographical basis is now available for the use of Fellows in the Society's Rooms. Addresses in Great Britain are grouped under counties: elsewhere under Dominions, Colonies, Foreign States, etc.

ADMISSION OF FELLOWS

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-laws and attends the meeting on 1st December, 1948, is requested to inform the Secretary before 5.15 p.m. on that date.

PROCEEDINGS OF THE ORDINARY MEETING HELD ON 3RD NOVEMBER, 1948.

Dr. C. B. Williams, M.A., President, in the Chair.

Present, 72 Fellows and 26 Visitors.

The minutes of the Ordinary Meeting held on 6th October, 1948, were confirmed, and signed by the President.

The names of the following candidates for election were read: For the first time: R. G. Davies, Mahumed Hussein Bey, Mrs. J. Kenten, C. C. V. Meeser, G. Popov, Chao-Seng Tsi, D. Smith, and E. F. Whiteside.

For the second time: H. S. Atkinson, A. E. Gardner, R. S. Hanoman, M.B., B.Sc., Capt. D. Leatherdale, Dr. C. R. Palmer, H. R. Pearson, C. Teasdale, B.Sc., and Miss J. B. Walker, B.Sc.

The Secretary read the names of the following newly elected Fellows of the Society: M. V. Brian, The Zoology Department, Glasgow University, Glasgow; A. J. M. B. Chalmers-Hunt, 70, Chestnut Avenue, West Wickham, Kent; Dr. W. Cottier, Plant Diseases Division, Department of Scientific and Industrial Research, Private Bag, Auckland, New Zealand; F. Fernandez-Yepez, Ing. Agro., Division de Entomologia, Apartado 643, Maracay, Venezuela; Dr.

G. Heslop Harrison, B.Sc., Ph.D., F.R.S.E., Department of Agricultural Zoology, King's College, Newcastle-on-Tyne; P. H. Holloway, Warwick House, Fair Oak, Eastleigh, Hants.; D. L. Johns, B.Sc., East African Tsetse Research Organization, Head Office, Shinyanga; Major F. L. Johnson, M.B.E., District Manager, The United Africa Co. Ltd., Akuse, Gold Coast; Lt.-Col. P. W. Morrison-Godfrey, 18, Queen's Road, Bury St. Edmunds, Suffolk; Dr. Kurt L. Roos, Bury Lodge, Storrington, Sussex; W. Ruttledge, B.A., Rosturk, Westport, Co. Mayo, Eire; G. H. Satchell, B.Sc., Ph.D., Zoology Department, University of Otago, Dunedin, New Zealand; T. R. E. Southwood, Parrock Manor, Gravesend, Kent; F. T. Vallins, 4, Tattenham Grove, Tattenham Corner, Epsom, Surrey; P. R. Wilkinson, C.I.R., P.O. Box 18, Entebbe, Uganda.

Thanks were voted to donors of gifts to the Library since the last meeting.

The death of Mr. C. J. Wainwright (elected in 1897), Dr. J. W. S. Macfie (elected in 1936) and Mr. P. J. Barraud (elected in 1902) was announced.

The President extended a welcome to Dr. H. C. Hockett, Entomologist to the Long Island Vegetable Research Farm, now on a visit to this country.

Mr. F. T. Vallins, Mr. A. J. M. B. Chalmers-Hunt, Mr. T. R. E. Southwood and Mr. E. Rivenhall Goffe signed the Obligation Book and were admitted as Fellows.

The Secretary read for the first time the following names of Officers and Council nominated for the ensuing year:

President.—V. B. Wigglesworth, M.A., B.Ch., M.D., F.R.S.

Treasurer.—Arthur Welti.

Secretary.—N. D. Riley, F.Z.S.

Editor.—H. Oldroyd, M.A.

Other Members of Council.—

E. B. Britton, M.Sc.

C. L. Collenette, F.R.G.S.

R. L. E. Ford, F.Z.S.

A. G. Hamilton, B.Sc., B.Agr., Ph.D., D.I.C.

B. M. Hobby, M.A., D.Phil.

H. B. D. Kettlewell, M.A., M.B., B.Chir., M.R.C.S., L.R.C.P.

C. W. Mackworth-Praed.

A. M. Massee, D.Sc.

J. A. Simes, O.B.E.

T. H. C. Taylor, D.Sc.

W. H. Thorpe, M.A., Sc.D.

C. B. Williams, M.A., Sc.D.

A. J. A. Woodcock, M.Sc.

Alternative nominations supported by four properly qualified Fellows of the Society must reach the Secretary before the meeting to be held on 1st December, 1948.

A communication on the subject of biological control was made by Dr. T. H. C. Taylor, an abstract of which appeared on p. 40.

The President, in thanking Dr. Taylor for his interesting talk, referred to his own experiences in methods of biological control in the West Indies and in Egypt, and said that when control by this means was successful, the result was usually spectacular.

Professor Buxton recalled that when working in Samoa he had searched for *Promecotheca*, which had been earlier reported as a pest, but found it exceedingly rare.

Dr. van Emden said that an observation made during studies of *Stegobium paniceum* L. and its parasite, *Cephalonomia*, supported Dr. Taylor's observations concerning the activities of *Pediculoides*, as all the specimens in an experiment were killed by this mite. One of the most important features of a suitable parasite would seem to be consistency in the choice of a specific host so as to avoid dispersal of the effort.

Dr. Taylor said, in reply to an enquiry by Dr. Richards, that all stages of *Promecotheca* occurred at all times in Java, and that he felt certain the mite was present there, but not necessarily in the palms.

Dr. R. L. Usinger said that in Guam repeated reintroduction of the Coccinellid predator of *Aspidiotus destructor* was necessary to maintain control, and he wondered what factor enabled it to persist in Fiji.

Dr. Taylor said this was undoubtedly due to the wider range of hosts in the larger islands.

Dr. A. P. Kapur pointed out that the Coccinellid used in Guam in the control of *Aspidiotus* was not the same species as that imported from Trinidad to control the scale in Fiji, and this might account for the different results.

Mr. C. N. Hawkins said it appeared that the introduction of alternative hosts for an introduced parasite might sometimes be desirable.

N. D. RILEY, *Honorary Secretary.*

The next meeting (Annual Meeting) will be held on 19th January, 1949.

NOTICES

In addition to the *Transactions* and *Proceedings* (Series A, B, and C), the following publications are available on application at the Society's rooms:—

THE GENERIC NAMES OF BRITISH INSECTS, prepared by the Committee on Generic Nomenclature of the Royal Entomological Society of London, with the assistance of the Department of Entomology of the British Museum (Natural History):

- Part 1. Recommendations relating to the publication of the committee's reports price 6*d*.
- Part 2. The generic names of the British Rhopalocera with a check list of the species price 3*s*. 6*d*.
- Part 3. The generic names of the British Odonata with a check list of the species price 3*s*. 6*d*.
- Part 4. The generic names of the British Neuroptera, with a check list of the British species price 3*s*. 6*d*.
- Part 5. The generic names of the British Hymenoptera Aculeata, with a check list of the British species price 15*s*. 0*d*.
- Part 6. The generic names of the British CARABIDÆ, with a check list of the British species price 10*s*. 0*d*.
- Part 7. The generic names of the British Hydradephaga, with a check list of the British species price 5*s*. 0*d*.
- Part 8. The generic names of the British Hemiptera-Heteroptera, with a check list of the British species price 39*s*. 0*d*.

STYLOPS, a Journal of Taxonomic Entomology.

1932-1935. Vols. 1-4 (all issued). Price £1 16*s*. 0*d*. each; to Fellows, £1 7*s*. 0*d*.

ABSTRACT OF PROCEEDINGS OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON. 1935. Nos. 1-6 (all issued). 3*s*. 0*d*.

HUBNER: A BIBLIOGRAPHICAL AND SYSTEMATIC ACCOUNT OF THE ENTOMOLOGICAL WORKS OF JACOB HUBNER AND THE SUPPLEMENTS THERETO. In 2 vols. By Francis Hemming.

Price Vol. 1. 605 pp. £1 15*s*. 0*d*.

„ Vol. 2. 275 pp. 15*s*. 0*d*.

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